Fall 2005

# Kansas Environmental News

## Secretary's Corner

The KDHE hosted another successful Environmental Conference this year in Wichita honoring several organizations for their outstanding efforts to reduce waste and prevent pollution. Approximately 375 individuals attended the three-day conference at the Hyatt Regency in August. The effort focused on environmental compliance and pollution prevention. It was an honor to attend the Pollution Prevention Awards luncheon to recognize eight organizations that have made great strides in improving and preserving the environment. It's the work of individuals, businesses, and communities together that makes our state beautiful and preserves our natural resources. KDHE looks forward to hosting another successful conference in 2006 in Topeka.

Despite another hot summer, the 2005 Kansas City ozone levels are expected to stay within the required standards this year. Even though the levels were generally higher this summer with several days where monitors exceeded the ozone standard, when mixed with last year's very low readings, Kansas City is still expected to meet the air quality standards. KDHE staff and local government staff have stepped up efforts to implement voluntary programs to ensure that Kansas City continues to meet the standards. One example is a program to reduce emissions from lawn and garden equipment such as lawnmowers and string trimmers. Keep up the good work.

KDHE is moving forward with newly revised Radiation Protection Regulations. The agency regulates radiation producing devices and radioactive materials (except nuclear reactors) to ensure that radiation exposure to workers and the public are kept as low as reasonably achievable. The rewrite of these regulations will ensure they are compatible with federal and state regulations, accommodate the latest technologies that utilize radiation, and are more user- friendly. The most significant change is in the regulation of radioactive material in medicine. The federal regulations are adopted and take a performance-based approach to the regulatory process. Another major change is in the security of radioactive material. Both the federal and state authorities are taking a strong, unified stance on the security of radioactive material to keep it from getting into the wrong hands. We expect this nearly 500-page package to be enacted by the end of this year resulting in a positive impact on the safety of Kansans.

As we move closer to the legislative session, KDHE staff is reviewing several legislative initiatives for the 2006 session. We look forward to working with our partners regarding these and other environmental issues in the weeks and months ahead.

Be well,

Roderick L. Bremby
KDHE Secretary

## *Inside this issue:*

# Pollution Prevention Efforts Recognized

*by Cathy Colglazier, KDHE Public Advocate*

The 2005 Pollution Prevention (P2) Awards were presented during the annual Kansas Environment Conference on August 23 - 25 at the Hyatt Regency Hotel in Wichita. The awards were presented at the conference luncheon on August 24.

The Kansas Department of Health and Environment (KDHE) sponsors the yearly awards for businesses, industries, municipalities, and individuals who make significant contributions to the prevention of pollution. Award applications are screened by agency staff, then submitted to an independent awards selection committee who recommends final awards to KDHE. The following companies were selected to receive awards this year:

**Cobalt Boats,** Neodesha**,** is a manufacturer of leading world-class day boats. The company was awarded for its effort in pollution prevention. Cobalt has taken an aggressive approach to P2 by adopting new technologies, processes, and by testing and using environmentally friendly products to build high quality boats.

**Columbian Chemicals Company**, Ulysses, produces carbon black, which is a fine powder used as a pigment and as a reinforcing agent in rubber. The company was awarded for its efforts on implementing an Environmental Management System (EMS). Through the EMS process, the company has been successful going beyond compliance to achieve measurable emissions and waste reduction goals.

**Edwards County Conservation District**, Kinsley, was awarded for its efforts in recycling. The conservation district took over the recycling program in 2003 and after making improvements to the facility, has turned it into a successful recycling program.

**Excel Industries, Inc.**, Hesston, is a leading turf equipment manufacturing company. The company was awarded for its efforts in pollution prevention by installing a state-of-the-art powder-coat paint system, which reduces air emissions and solid waste. The company was able to reduce its regulatory burden for its air permit and hazardous waste generator status.

Edwards County Conservation District received a P2 award. Pictured from left to right: Megan Neilson, Stacy Neilson, KDHE Secretary Roderick Bremby, Richard Neilson, Brent Neilson.

**Newton Medical Center,** Newton, was awarded for its efforts in pollution prevention. A mercury spill in 1999 that resulted in a cleanup, disposal, and equipment replacement price tag of $41,500 prompted the medical center to eliminate mercury from its environment. The center also began proactively looking at other ways to reduce hazardous materials in the hospital and in its waste stream as well as opportunities to conserve natural resources.

**Philips Lighting**, Salina, was awarded for its efforts in technology innovation. The company recently produced its one billionth ALTO lamp at the world's largest fluorescent facility, located in Salina, Kansas. Philips pioneered a new category of low-mercury fluorescent lamps with the introduction of ALTO technology in 1995, and has since earned a reputation for significantly heightening corporate environmental awareness and helping companies implement sustainable lighting practices.

**Sedgwick County Courthouse** was awarded for its efforts in energy efficiency. The county courthouse was constructed in 1959 and was experiencing high energy costs and mounting repair bills from aging HVAC equipment that had outlived its useful life. Instead of simply replacing the aging units, the county chose an aggressive energy savings approach for replacing the

*continued on page 4*

# KDHE Regulations in Process

The following table depicts the KDHE regulations that are in the process of being developed, amended, or revoked. If you have questions on any of the regulations, feel free to contact Cathy Colglazier at 800-357-6087.

| Regulation | Division Draft | DOA Review | AG Review | Public Hearing | Effective |
|---|---|---|---|---|---|
| **Waste Management** | | | | | |
| Definitions (A) | 1/05 | *10/05 | *11/05 | *1/06 | *3/06 |
| Tires (A) | 9/04 | *10/05 | *11/05 | *1/06 | *3/06 |
| Industrial Landfills | *1/06 | *3/06 | *4/06 | *6/06 | *8/06 |
| Hazardous Waste Update (A) | *6/06 | *7/06 | *8/06 | *10/06 | *12/06 |
| **Air and Radiation** | | | | | |
| Inventory Report Regs | 7/04 | 1/05 | 2/05 | 7/05 | 9/05 |
| Radiation Registration Licensing, Safety Standards and Requirements | 9/03 | 7/05 | 7/05 | 9/05 | *12/05 |
| Definitions (A) | *10/05 | *11/05 | *12/05 | *2/06 | *3/06 |
| Permitting Rules (A) | *10/05 | *12/05 | *2/06 | *3/06 | *4/06 |
| Transportation Conformity (A) | *12/05 | *1/06 | *2/06 | *3/06 | *4/06 |
| Acid Rain Permits (A) | *1/06 | *3/06 | *4/06 | *5/06 | *6/06 |
| Acid Rain Nox (N) | *1/06 | *3/06 | *4/06 | *5/06 | *6/06 |
| **Water** | | | | | |
| Geology | | | | | |
| Water Well (GMD #2) (N) | 2/04 | 1/05 | 3/05 | 6/05 | 9/05 |
| Livestock Waste Management | | | | | |
| Groundwater (N) (A) (R) | 12/03 | 5/04 | 11/04 | 3/05 | *11/05 |
| **Environmental Field Services** | | | | | |
| Surface WQS/Register | 1/05 | 1/05 | 1/05 | 4/05 | *5/06 |
| **Environmental Remediation** | | | | | |
| Environmental Use Control | 6/04 | *7/05 | *10/05 | *2/06 | *6/06 |
| Surface Mining | 9/03 | *12/05 | *2/06 | *6/06 | *9/06 |

New (N), Amended (A), Revoked (R)
* Denotes projected date.

Updated 10/1/05

## *P2 Efforts Recognized (continued from page 2)*

equipment. The energy efficiency modifications made to the courthouse reduced its electricity usage by over two million kwh per year and reduced natural gas usage by over 1,500 MCFs per year.

**Wolf Creek Nuclear Operating Corporation (WCNOC)**, Burlington, was awarded for its efforts in pollution prevention. WCNOC created a waste minimization plan to help the facility achieve a reduction in both the volume and toxicity of waste generated. By using techniques such as product substitution, efficient use of chemicals, improved chemical control, improved work processes, reuse, and recycling, the company was able to reduce its hazardous waste regulatory burden by dropping from an EPA Generator classification to a Kansas Generator classification.

Additional information on the projects implemented by these award-winning facilities and the P2 awards program can be found on the KDHE Web site at *http://www.kdhe.state.ks.us/sbcs/p2_pollution_prevention_awards.html* or by calling Cathy Colglazier at 800-357-6087.

## *KDHE Proposes to Amend the Kansas Radiation Protection Regulations*

*by Tom Conley, KDHE Bureau of Air and Radiation*

The Bureau of Air and Radiation of the Kansas Department of Health and Environment is proposing to amend the Kansas Radiation Protection Regulations (KRPR). The purpose of this is to ensure all the KRPRs are consistent with other state's regulations, current industry standards and compatible with the Nuclear Regulatory Commission (NRC) regulations. The proposed KRPRs reduce the regulatory burden for low-risk activities, particularly in the medical field. In response to heightened concerns regarding homeland security, the regulations increase the security and accountability of radioactive materials.

These regulations are for the use of all radiation, radiation machines, and radioactive materials to ensure the maximum protection of the public health and the maximum safety to all persons at, or in the vicinity of, the place of use, storage, or disposal of sources of radiation. These regulations are intended to be consistent with the best use of radiation machines and radioactive materials, and to encourage the constructive uses of radiation.

The regulations apply to all persons who receive, possess, use, transfer, own or acquire any source of radiation, except those reserved for regulation by the NRC. The provisions of these regulations do not limit the exposure of patients to radiation during diagnosis or therapy by persons licensed to practice one or more of the healing arts, dentistry or podiatry.

In 1965 the State of Kansas entered into an agreement with the Nuclear Regulatory Commission (NRC) to regulate radioactive materials under the provisions of the federal Atomic Energy Act. Kansas has operated as an *agreement state* since that time. The regulated community in Kansas includes 321 facilities licensed to use radioactive materials, 2,447 facilities registered to use x-ray equipment, and 316 facilities using radioactive materials under general licenses. These facilities include industrial operations, research labs, medical and dental facilities, and security screening operations. To assure appropriate protection of the public and operators, radiation exposures must be kept as low as reasonably achievable. The role of the Radiation Control Program is to provide the appropriate oversight and regulation.

KDHE conducted a public hearing on September 23 to consider the adoption of the proposed revocations, amendments, and new regulations. All interested parties were to submit written comments prior to the meeting. The proposed regulations, public hearing notice and regulatory impact statement can be accessed on the KDHE website at *http://www.kdhe.state.ks.us*.

## No E-Waste Legislation to be Proposed by KDHE in 2006

*by Bill Bider, KDHE Bureau of Waste Management*

You may have heard that KDHE is working with a group of stakeholders to develop an e-waste management plan for Kansas and that legislation would be introduced by KDHE in 2006 to implement a program to manage this growing waste stream. It is true that the KDHE Bureau of Waste Management (BWM) has been at work developing a plan and seeking input from a diverse interest group. The goal of BWM and this work group is to establish a program that would stimulate e-waste recycling and lessen landfilling. A draft plan was prepared by BWM and some preliminary comments have been received. However, a decision was made within the department to defer further action on e-waste legislation. No bill will be introduced by KDHE in the coming year.

Given this decision, KDHE concluded that e-waste disposal in monitored muicipal solid waste landfills must remain legal. There can be no landfill ban on e-waste because there is inadequate recycling services in most of Kansas. While the number of private companies entering into the e-waste recycling business continues to grow, most rural counties have limited practical opportunities for their households and businesses to recycle. If a landfill ban is implemented without adequate and reasonably priced recycling services, open dumping of e-waste would almost certainly become a major problem. Until a practical statewide system of collection is in place, it is KDHE's policy to allow e-waste disposal in any municipal solid waste landfill.

A second key point relates to the regulation of businesses that collect and process e-waste. Even without new legislation, KDHE has authority to require facilities that process e-waste to obtain solid waste processing facility permits. The department presently requires any business that processes e-waste by grinding, crushing, chopping, compaction, or in others ways that have the potential to release hazardous constituents to the environment to obtain a permit. KDHE will use regulatory discretion and not require permits when businesses simply collect, segregate, repair, and transport e-waste to another company that performs processing activity. This discretion will hopefully stimulate the development of recycling services.

If you would like further information about the preliminary work done by KDHE and the workgroup, please contact Bill Bider at (785) 296-1612 or at *wbider@kdhe.state.ks.us* or Kent Foerster at (785) 296-1540 or at *kfoerste@kdhe.state.ks.us*.

### *2005 Kansas Environmental Conference Presentations Available Online!*

The 2005 Kansas Environmental Conference was held August 23 - 25 at the Hyatt Regency in Wichita. Approximately 375 participants attended the conference, which provided regulatory updates, compliance information, and pollution prevention techniques. Evaluations indicate the conference was a success. Thanks to all who participated or assisted at the conference!

Presentations from the conference are now available online. Just go to *http://www.kdhe.state.ks.us/sbcs/environment_conf.html.*

Plans are underway for the 2006 conference, which is scheduled to be held in Topeka. If you have any suggestions or would like to assist with the planning of the agenda, please contact Cathy Colglazier at *ccolglaz@kdhe.state.ks.us.*

# P2 Case Study - Cobalt Boats

*by Sherry Davis, KSU Pollution Prevention Institute*

Cobalt Boats, a manufacturer of leading world-class day boats, is located in the small community of Neodesha, Kansas. The company prides itself in building an exceptional, not just acceptable boat. In 2003, the company built almost 2000 boats, the majority two to three feet longer than previous lines of boats offered, while continuing to significantly reduce raw material usage, waste, and air emissions from its manufacturing processes.

Rigid fiberglass products such as boat hulls and decks and related small parts are produced using a labor-intensive, hands-on process. Boat parts are built from the outside layer inwards in molds designed and produced at Cobalt. The molds are first coated with a wax-like substance, or releasing agent, to facilitate removal of the finished part, then sprayed with a gel coat that is the clear or colored outer surface of the boat seen by the customer. Fiberglass is then applied in layers saturated with a catalyst-activated resin.

In boat building, "chopped" and woven mats or "laminate" of fiberglass are used to build layers of fiberglass that make up the parts. Workers use hand rollers on each layer to remove bubbles or wrinkles in the fiberglass and to create a uniform density and thickness before another layer is added. The parts are then air-cured into a hard, very durable, part. Acetone is used in large quantities in the industry to clean tools and equipment contaminated with activated resins and fiberglass. Activated resins actually "cure" or dry on the tools as they are being used, and for this reason must be cleaned constantly during all layers of the laminate application process.

Cobalt's pursuit of environmental excellence began in 1997. One of Cobalt's first environmental projects was to recycle acetone at its facility. The original acetone recycling project saved Cobalt more than $50,000 in virgin acetone purchases and resulted in a reduction of 27 tons of acetone-related hazardous waste disposal costs in 1998. The acetone recycling project is still going strong today and saving the company money. In the first six months of 2004, 15,082 gallons of acetone have already been recycled, which will result in a projected yearly savings of $72,000 in virgin acetone purchases (the cost of virgin acetone has tripled since 1997). The process eliminates 137 tons of hazardous waste generation, saving $41,000 in hazardous waste disposal and management costs. This year's success comes while producing almost 400 additional, larger boats than the first year the recycling project was initiated.

*"Our coatings application processes have really evolved over the past decade. These changes have resulted in decreased air emissions and raw material costs,"* explains Steve Blaich, plastics engineer. Cobalt's production and environmental teams continued their success by changing the technology used to apply chopped fiberglass and resin into the mold. Flow coaters are now used, which allow the resin and "chopped" fiberglass to be applied in one step with a high-volume, lower operating pressure spray gun that greatly increases transfer efficiency (TE) and reduces the amount of material losses from overspray. A higher TE of flow coaters resulted in more of the product going onto the part and much less overspray on the floor liner. According to Greg Ternes, Cobalt's environmental manager, "Less overspray means fewer floor changes, less waste, and lower cost." The reduced changeout frequency of the floor liner alone originally resulted in a 70-ton reduction of solid waste and $40,000 in landfill costs. More resin going on the part also meant less resin material purchased and fewer emissions overall.

In 2003, the company also initiated a pilot project to incorporate closed molding in the production of some of the smaller boat parts. Closed molding involves using a lower and upper shell mold to build a part, which will have two "finished" sides. The fiberglass layers are laid into the mold dry; the molds are then sealed together and the resin is injected into the mold under a vacuum to evenly saturate the fiberglass layers. The part cures in the "closed" mold with virtually no emissions. Overspray and floor liners are totally

eliminated, as well as hand-rolling and working between each layer, so all tool and flow-coater gun cleanup and acetone use is also eliminated. Because there are no hazardous air emissions, costly air handling systems to control employee exposures and maintain an 80º F ambient process-working temperature is also eliminated, which translates into significant energy cost savings as well.

The closed-molding process lends itself to increased durability for the final product, and insures laminate thickness and weight consistency. The process also minimizes air pocket issues in contrast with the open-molding process. In addition, the process lends itself to decreased overspray and subsequent cleanup. Labor and material efficiency is increased, solid and hazardous wastes and emissions are drastically reduced, and product durability and consistency increase, yielding an even higher quality product and raising the quality standard for their competitors.

Closed-molding supporters have been working the bugs out of the process and to date have developed 30 upper shells for small parts. Based on total working hours, the closed-molding process results in .63 parts per employee work-hour as compared to the open process which produces only .34 parts per employee work-hour—a process efficiency almost twice that of the open-molding process. Although Cobalt has yet to quantify all benefits of closed molding, the following are already obvious:

- Minimizes use of liner board which reduces labor, raw materials, and waste from the small-parts laminate lay-up process. Closed-molding small parts eliminates 3.74 tons of landfill waste, represents a savings of $3,724 in raw materials and waste disposal costs, and reduces labor-related costs by $2,886.
- Eliminates use of acetone for tool wash.
- Eliminates emissions of VOCs and HAPs from the lay-up process because the resin is injected and cured in a sealed, closed mold.

Emissions have continued to be a target for the Cobalt environmental management and materials team under two new initiatives: change the materials used in the process and change the technology used to reduce or eliminate HAP emissions from some of their processes. Sound ambitious? It may be, but Cobalt is off to a great start on its goal. In 1999, Cobalt switched one of its bulk resins to one with almost 6 percent lower styrene content. This particular resin comprised 40 percent of the total resin used then. Today, both bulk resins used in the laminate process are low-styrene content. Based on 2003 resin usages, the lower styrene resins eliminated 70.8 tons of styrene from laminating processes.

In 2001, Cobalt began to work on the HAP content in its upholstery adhesive, which was nearly 60 percent HAP or 38,218 lbs of HAP. Cobalt switched to a new adhesive with only 20 percent HAP content in 2002, lowering HAP usage to approximately 13,000 lbs–representing 51,064 lbs HAP reduction in 2002 and 2003. In August of 2004, the company switched to an adhesive that contains no HAP. Over a three-year period, Cobalt managed to eliminate at least 39.5 tons of HAP from its upholstery adhesive processes.

Cobalt has proven itself a world-class leader in the production of high-quality boats, but it also continues to raise the standard of environmental management in their industry. Cobalt's commitment to environmental excellence continues through environmental management techniques and constant re-evaluation of processes to increase environmental benefits. Cobalt's goal is to produce 80 percent of its small parts in closed molds, and the company is currently committing resources to a new facility in order to house the new process. We congratulate Cobalt on being identified as one of Kansas' Best of the Best.

**Where can I get more information?**

Kansas State University's Pollution Prevention Institute operates the Small Business Environmental Assistance Program (SBEAP) for the state of Kansas. SBEAP maintains a toll-free technical hotline, and can visit your facility to review compliance issues and identify pollution prevention opportunities. Call SBEAP at 800-578-8898 or visit our Web site at *www.sbeap.org* for free, confidential assistance. Greg Ternes of Cobalt Boats can be contacted at 620-325-5653 ext. 565, or at *www.cobaltboats.com.*

**Kansas Department of Health and Environment**
**Bureau of Environmental Field Services**
**1000 SW Jackson, Suite 430**
**Topeka, Kansas 66612-1367**




# Air Quality 101 Workshops

These workshops will provide an overview of the Kansas Air Quality Program with a focus on regulatory updates and changes.

January 10, 2006 Salina, Carver Center (Time TBA)

January 19, 2006 Wichita, Sedgwick County Extension (Time TBA)

January 24, 2006 Overland Park, KU Edwards Campus (Time TBA)

To register call the Small Business Environmental Assistance Program at 1-800-578-8898 or watch for more details at *www.sbeap.org*.

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